tor, emergency department (ED), or "other," as well as the number of CD-related hospital admission days. Unit costs were assigned to each type of health care resource using national non-Medicare 2011 reimbursement rates. Hospitalization cost was estimated using the HCUP.net mean daily cost of inpatient stay (principal diagnosis 333.83). Cost of an ED visit was estimated by the mean paid amount for ED visit (principal diagnosis 333.83) using commercial claims data. **RESULTS:** Baseline data were available for 786 participants at time of analysis. The mean age was 57.7 years, and the majority (76%) were female. The mean (SD) number of visits to a primary care provider was 1.4 (2.1), 1.9 (1.9) for neurologist, 0.7 (1.8) for physiatrist, 1.8 (3.8) for physical/occupational therapy, 0.2 (0.9) for neurosurgeon, 1.3 (3.1) for alternative care provider, 1.1 (3) for chiropractor, and 3.2 (2.7) for "other." Participants reported a mean(SD) of 0.2(0.9) visits to the ED and 0.1(0.6) hospital admission days. The mean total cost of CD over 6 months was $1,255.80 (range $0-$63,320.20; median $639.80). The largest single cost driver was the number of hospital admission days. **CONCLUSIONS:** The economic impact of CD-related health care resource use should not be overlooked when assessing disease burden.

PND12

THE COSTS ANALYSIS OF MULTIPLE SCLEROSIS AT DIFFERENT STAGES IN IRAN

Khanizadeh H, Izham M, Akmal A
Universiti Sains Malaysia, Penang, Malaysia

OBJECTIVES: The economic burden of Multiple Sclerosis (MS) on society and the individuals concerned is not known. Documenting such costs is essential for several reasons: costs of illness is a key factor of optimal disease management policies, knowledge of cost is useful for allocating research and development. The aim of our study as the first pharmacoeconomic investigation in Iran was to estimate the costs of multiple sclerosis according to severity of disease. **METHODS:** Total, direct and indirect costs were compared in 160 patients divided into three groups categorized by disease severity: stage I Expanded Disability Status Scale (EDSS <2.5), stage II (EDSS 3- 4.5) and stage III (EDSS >5).The majority of these patients (94%) developed relapsing- remitting MS.A minority of the patients (0.2-4 %) developed secondary progressive and primary progressive MS. Cost evaluation was performed from the societal perspective and covered the one-year period. The study was carried out at the Division of Neurology at Ghaem Hospital and MS association in Mashhad in northeast of Iran and was approved by the local ethics committee. **RESULTS:** The mean total cost/patient for one year was estimated at $27,095, $27,997and $31,662 for stage I, II and III, respectively. Both direct and indirect costs increased with MS progression. For indirect cost the main item was productivity loss. The mean extra medicine (treatments for MS symptoms and adverse effects of medications) cost/patient for one year was calculated at $19,036. **CONCLUSIONS:** This study confirms that MS represents a high economic burden to patients and society, with direct costs greatly exceeding indirect costs. As costs increase with disease progression, treatment efforts should focus on patients in the early stages of MS. Disease support system that monitors a variety of common progressive signs for the MS individuals is a key element of a management program as well.

PND13

ECONOMIC BURDEN OF LENNOX-GASTAUT SYNDROME

Swindle JP, Song R, Liu F, Adams S
OptumInsight, Eden Prairie, MN, USA

OBJECTIVES: Seizure control through antiepileptic drugs (AEDs) is integral to treatment of Lennox-Gastaut syndrome (LGS). Although six AEDs are approved for LGS (clobazam most recently, October 2011), no standard treatment paradigm has been established. Understanding the economic burden associated with LGS is critical to developing such guidance. The objective of this study was to examine health care resource utilization and costs for patients with LGS. **METHODS:** Medical and pharmacy claims data (1/1/2007–9/30/2010) from a large US managed health care plan affiliated with OptumInsight were analyzed. Study patients were those with evidence of LGS based on 2 medical claims (≥30 days apart) with diagnosis (ICD-9-CM) of generalized, nonconvulsive (or convulsive) epilepsy. Evidence of developmental diagnoses and 12 months of continuous health plan enrollment following initial epilepsy diagnosis were required. Health care resource utilization and costs were examined during a 12-month follow-up period and computed separately as all-cause, epilepsy-related (i.e., any epilepsy care), or related to seizure-attributable events (e.g., lacerations, fractures). **RESULTS:** A total of 1,948 patients with evidence of LGS were identified; demographics were consistent with published surveys. Mean counts of epilepsy-related health care visits at 12 months were 10.73 (all-cause: 33.97) for ambulatory visits and 0.75 (all-cause: 0.86) for inpatient admissions. Mean epilepsy-related health care cost was $29,911 (all-cause: $44,797), of which the greatest components were inpatient costs (epilepsy-related: $18,119; all-cause: $19,590) and ambulatory costs (epilepsy-related: $5,515; all-cause: $11,907). Mean medical cost related to seizure-attributable events was $13,038. **CONCLUSIONS:** A high economic burden was observed in this LGS sample, with frequent health care visits and high costs attributable to epilepsy care. Nearly one-third of total medical costs were associated with seizure-attributable events, highlighting the need for effective seizure control. These results will be useful for understanding the budgetary impact and cost effectiveness of AED therapy in LGS treatment.

PND14

ECONOMIC BURDEN OF REFRACTORY EPILEPSY WITH PARTIAL ONSET SEIZURES – AN ASSESSMENT OF DIRECT HEALTH CARE RESOURCE USE AND COSTS

Chen SY[1], Wu N[1], Boulanger L[1], Sacco P[2]
[1]*United BioSource Corporation, Lexington, MA, USA,* [2]*Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA*

OBJECTIVES: The majority of epileptic patients manage their condition with antiepileptic drugs (AEDs) to prevent seizures. Despite being adherent to AEDs, some patients fail to have adequate seizure control; therefore, they have refractory epilepsy. This study assessed the health care costs and resource utilization of epilepsy patients with partial onset seizures (POS) who were refractory compared to non-refractory patients. **METHODS:** Administrative claims from 2004-2008 in a US commercially insured population were analyzed. Patients aged 18-64 years were selected if they had medical claims with POS (ICD-9-CM codes: 345.4, 345.5). This study used an operational definition of 3 different AED agents dispensed as refractoriness. Patients were considered refractory from the year they received the third AED and forward. Annual direct health care utilization and costs within each calendar year among patients who were continuously enrolled were compared between refractory and non-refractory cohorts. **RESULTS:** The study identified 79,149 patients with POS (mean age 33 years; 54.8% female), and 8,714 (11%) patients became refractory. In 2008, refractory patients were more likely to have a hospital admission (27.2% vs. 16.9%; $p<0.001$). Average annual health care costs for refractory patients were significantly higher than non-refractory patients ($33,613 vs. $19,085; $p<0.001$), as well as by settings for inpatient ($11,780 vs. $6,076; $p<0.001$), outpatient ($12,677 vs. $8,125; $p<0.001$) and pharmacy costs ($5,280 vs. $2,256; ($p<0.001$). Close to half of total costs were attributable to POS-related services. Similar trends were observed when assessing POS-related costs and utilization. The differences were consistent across calendar years examined. **CONCLUSIONS:** The findings from this study suggest refractoriness in epilepsy patients with POS is associated with high economic burden from the health insurer's perspective. Refractory patients incurred 76% more healthcare costs than non-refractory patients. Improving seizure control and reducing the economic burden of refractory epilepsy remain important unmet medical needs in this population.

PND15

HEALTH CARE RESOURCE UTILIZATION AND EXPENDITURES OF EPILEPSY IN PEDIATRIC AND ADULT MEDICAID POPULATION

Cramer J[1], Wang Z[2], Li X[2], Copher R[2], Powers A[2]
[1]*Yale University School of Medicine, Houston, TX, USA,* [2]*Eisai, Inc., Woodcliff Lake, NJ, USA*

OBJECTIVES: This study estimated health care resource utilization (HCRU) and medical costs in both pediatric and adult Medicaid populations, comparing epilepsy-related costs with overall costs. **METHODS:** A retrospective analysis was conducted using Thomson Reuters' Medicaid claims data from 13 states (2005-2009). Epilepsy patients were identified through ICD-9 code 345.xx and 780.39. Annual HCRU and medical costs (in 2009 dollars) in adult (>=18 years) and pediatric patients (2-17 years) were estimated separately. HCRU was considered as epilepsy-related if it was associated with ICD-9 code of 345.xx or 780.39, or was an antiepileptic drug. **RESULTS:** A total of 75,111 patients were identified with epilepsy, with 31,484 pediatric (mean age 8.8 years) and 43,627 adult (mean age 40.4 years). Annually, a pediatric patient with epilepsy incurred 0.23 hospital admissions (0.13 epilepsy-related), 1.31 ER visits (0.38 epilepsy-related), 6.12 physician office visits (1.25 epilepsy-related), 3.25 outpatient hospital visits (0.91 epilepsy-related), 27.17 other outpatient visits (1.62 epilepsy-related), 22.3 prescriptions (3.96 epilepsy-related). Among adult patients, average HCRU was 0.90 hospital admissions (0.43 epilepsy-related), 3.52 ER visits (0.66 epilepsy-related), 10.26 physician office visits (1.62 epilepsy-related), 7.44 outpatient hospital visits (1.07 epilepsy-related), 58.69 other outpatient visits (2.65 epilepsy-related), 71.43 prescriptions (10.1 epilepsy-related). Direct medical costs per patient were $10,669 (18.4% epilepsy-related) for a pediatric patient and $29,886 (17.7% epilepsy-related) for an adult patient. Overall direct medical costs associated with active epilepsy in the identified Medicaid population were $293 million ($62 million for pediatric and $231 million for adult). **CONCLUSIONS:** Non-epilepsy related HCRU and direct medical costs dominated HCRU and direct medical costs in Medicaid patients with epilepsy, indicating that substantial comorbidities are associated with epilepsy patients in the Medicaid population. Adult patients had higher HCRU and direct medical costs compared to pediatric patients, which may be related to likely differences in the types of epilepsy experienced by children and adults.

PND16

ECONOMIC EVALUATION OF PREGABALIN AND GABAPENTIN FOR NEUROPATHIC PAIN FROM THE BRAZILIAN PUBLIC HEALTH CARE SYSTEM PERSPECTIVE

Mould JF[1], Fujii RK[2], Lazaridis E[2], Manfrin DF[2]
[1]*Pfizer, Inc., New York, NY, USA,* [2]*Pfizer, Inc., São Paulo, SP, Brazil*

OBJECTIVES: Based on the work of Sicras-Mainar et al. 2011, evaluating real world data on the resource consumption of patients treated with pregabalin and gabapentin for neuropatic pain, an adaptation to the Brazilian public health care system was carried in order to compare both strategies. **METHODS:** A cost-minimization study was designed considering the length of treatment, daily dose strengths distributions, hospitalization days, medical visits, physiotherapy sessions and other concomitant medications used. Frequencies and resource use was obtained from the aforementioned study, and prices were retrieved from national databases (Banco de Preços em Saúde and SIGTAP - Sistema de Gerenciamento da Tabela de Procedimentos, Medicamentos e OPM do SUS). To best represent the values for the not-normal distribution of length of treatment frequencies reported in the study, a Monte Carlo simulation using 10.000 iterations was carried considering a triangular distribution. The time horizon was defined as 1 year. Values were expressed in 2011 USD. **RESULTS:** The overall costs of medications compared in this study per patient were 332.74 and 291.20 USD for pregabalin and gabapentin, respectively. Health care utilization costs were 89.12 and 128.76 USD for pregabalin and gabapentin treated patients respectively. Other concomitant medication costs were 56.29 and